ATTACHMENT 1 TO LICENSE AMENDMENT NO. 30

TO FACILITY COMBINED LICENSE NO. NPF-91

DOCKET NO. 52-025

Replace the following pages of the Facility Combined License No. NPF-91 with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Combined License No. NPF-91

REMOVE	INSERT
7	7

Facility Combined License No. NPF-91
Appendix C – Inspections, Tests, Analyses and Acceptance Criteria

REMOVE	INSERT
C-82	C-82
C-112	C-112
C-130	C-130
C-142	C-142
C-149	C-149
C-150	C-150
C-159	C-159
C-166	C-166
C-179	C-179
C-190	C-190
C-191	C-191
C-192	C-192
C-219	C-219
C-224	C-224
C-252	C-252
C-255	C-255
C-270	C-270
C-286	C-286

Facility Combined License No. NPF-91

Appendix C – Inspections, Tests, Analyses and Acceptance Criteria (continued)

REMOVE	INSERT
C-334	C-334
C-342	C-342
C-344	C-344
C-408	C-408
C-410	C-410
C-418	C-418
C-425	C-425
C-429	C-429
C-455	C-455

(7) Reporting Requirements

(a) Within 30 days of a change to the initial test program described in FSAR Section 14, Initial Test Program, made in accordance with 10 CFR 50.59 or in accordance with 10 CFR Part 52, Appendix D, Section VIII, "Processes for Changes and Departures," SNC shall report the change to the Director of NRO, or the Director's designee, in accordance with 10 CFR 50.59(d).

(b) SNC shall report any violation of a requirement in Section 2.D.(3), Section 2.D.(4), Section 2.D.(5), and Section 2.D.(6) of this license within 24 hours. Initial notification shall be made to the NRC Operations Center in accordance with 10 CFR 50.72, with written follow up in accordance with 10 CFR 50.73.

(8) Incorporation

The Technical Specifications, Environmental Protection Plan, and ITAAC in Appendices A, B, and C, respectively of this license, as revised through Amendment No. 30, are hereby incorporated into this license.

(9) Technical Specifications

The technical specifications in Appendix A to this license become effective upon a Commission finding that the acceptance criteria in this license (ITAAC) are met in accordance with 10 CFR 52.103(g).

(10) Operational Program Implementation

SNC shall implement the programs or portions of programs identified below, on or before the date SNC achieves the following milestones:

(a) Environmental Qualification Program implemented before initial fuel load;

(b) Reactor Vessel Material Surveillance Program implemented before initial criticality;

(c) Preservice Testing Program implemented before initial fuel load;

(d) Containment Leakage Rate Testing Program implemented before initial fuel load;

(e) Fire Protection Program

1. The fire protection measures in accordance with Regulatory Guide (RG) 1.189 for designated storage building areas (including adjacent fire areas that could affect the storage area) implemented before initial receipt

Table 2.1.3-3		
Component Name	**Tag No.**	**Component Location**
Source Range Detectors (4)	RXS-JE-NE001A/NE001B/ NE001C/NE001D	Containment
Intermediate Range Detectors (4)	RXS-JE-NE002A/NE002B/ NE002C/NE002D	Containment
Power Range Detectors – Lower (4)	RXS-JE-NE003A/NE003B/ NE003C/NE003D	Containment
Power Range Detectors – Upper (4)	RXS-JE-NE004A/NE004B/ NE004C/NE004D	Containment

Table 2.1.3-4 Key Dimensions and Acceptable Variations of the Reactor Vessel and Internals (Figure 2.1.3-2 and Figure 2.1.3-3)			
Description	**Dimension or Elevation (inches)**	**Nominal Value (inches)**	**Acceptable Variation (inches)**
RV inside diameter at beltline (inside cladding)	A	159.0	+1.0/-1.0
RV wall thickness at beltline (without cladding)	B	8.4	+1.0/-0.12
RV wall thickness at bottom head (without cladding)	C	6.0	+1.0/-0.12
RV inlet nozzle inside diameter at safe end	D	22.0	+0.35/-0.10
RV outlet nozzle inside diameter at safe end	E	31.0	+0.35/-0.10
Elevation from RV mating surface to centerline of inlet nozzle	F	62.5	+0.25/-0.25
Elevation from RV mating surface to centerline of outlet nozzle	G	80.0	+0.25/-0.25
Elevation from RV mating surface to centerline of direct vessel injection nozzle	H	100.0	+0.25/-0.25
Elevation from RV mating surface to inside of RV bottom head (inside cladding)	I	397.59	+1.0/-0.50
Elevation from RV mating surface to top of lower core support plate	J	327.3	+0.50/-0.50
Separation distance between bottom of upper core plate and top of lower core support with RV head in place	K	189.8	+0.20/-0.20

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
143	2.2.02.07e.i	7.e) The PCS provides a flow path for long-term water makeup to the PCCWST.	i) See item 1 in this table.	i) See item 1 in this table.
144	2.2.02.07e.ii	7.e) The PCS provides a flow path for long-term water makeup to the PCCWST.	ii) Testing will be performed to measure the delivery rate from the long-term makeup connection to the PCCWST.	ii) With a water supply connected to the PCS long-term makeup connection, each PCS recirculation pump delivers greater than or equal to 100 gpm when tested separately.
145	2.2.02.07f.i	7.f) The PCS provides a flow path for long-term water makeup from the PCCWST to the spent fuel pool.	i) Testing will be performed to measure the delivery rate from the PCCWST to the spent fuel pool.	i) With the PCCWST water level at 27.4 ft + 0.2, - 0.0 ft above the bottom of the tank, the flow path from the PCCWST to the spent fuel pool delivers greater than or equal to 118 gpm.
146	2.2.02.07f.ii	7.f) The PCS provides a flow path for long-term water makeup from the PCCWST to the spent fuel pool.	ii) Inspection of the PCCWST will be performed.	ii) The volume of the PCCWST is greater than 756,700 gallons.
147	2.2.02.08a	8.a) The PCCAWST contains an inventory of cooling water sufficient for PCS containment cooling from hour 72 through day 7.	Inspection of the PCCAWST will be performed.	The volume of the PCCAWST is greater than 780,000 gallons.
148	2.2.02.08b	8.b) The PCS delivers water from the PCCAWST to the PCCWST and spent fuel pool simultaneously.	Testing will be performed to measure the delivery rate from the PCCAWST to the PCCWST and spent fuel pool simultaneously.	With PCCAWST aligned to the suction of the recirculation pumps, each pump delivers greater than or equal to 100 gpm to the PCCWST and 35 gpm to the spent fuel pool simultaneously when each pump is tested separately.
149	2.2.02.08c	8.c) The PCCWST includes a water inventory for the fire protection system.	See ITAAC Table 2.3.4-2, items 1 and 2.	See ITAAC Table 2.3.4-2, items 1 and 2.
150	2.2.02.09	9. Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR.
151	2.2.02.10a	10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.2-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.2.2-1 using the controls in the MCR.	Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.2-1 to perform active functions.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
169	2.2.03.06	6. Each of the as-built lines identified in Table 2.2.3-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built PXS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.
170	2.2.03.07a.i	7.a) The Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
171	2.2.03.07a.ii	7.a) The Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.3-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
172	2.2.03.07b	7.b) The Class 1E components identified in Table 2.2.3-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.3-1 when the assigned Class 1E division is provided the test signal.
173	2.2.03.07c	7.c) Separation is provided between PXS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See ITAAC Table 3.3-6, item 7.d.	See ITAAC Table 3.3-6, item 7.d.

Table 2.2.3-6		
Equipment	**Tag No.**	**Function**
Hot Leg Sample Isolation Valves	PSS-PL-V001A/B	Transfer open
Liquid Sample Line Containment Isolation Valves IRC	PSS-PL-V010A/B	Transfer open
Containment Pressure Sensors	PCS-012, 013, 014	Sense pressure
RCS Wide Range Pressure Sensors	RCS-140A, B, C, D	Sense pressure
SG1 Wide Range Level Sensors	SGS-011, 012, 015, 016	Sense level
SG2 Wide Range Level Sensors	SGS-013, 014, 017, 018	Sense level
Hydrogen Monitors	VLS-001, 002, 003	Sense concentration
Hydrogen Igniters	VLS-EH-01 through 64	Ignite hydrogen
Containment Electrical Penetrations	P01, P02, P03, P06, P07, P09, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32	Maintain containment boundary

Table 2.2.4-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
Power-operated Relief Valve Block Motor-operated Valve Steam Generator 02	SGS-PL-V027B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Steam Line Condensate Drain Isolation Valve	SGS-PL-V036A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Line Condensate Drain Isolation Valve	SGS-PL-V036B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Main Steam Line Isolation Valve	SGS-PL-V040A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Main Steam Line Isolation Valve	SGS-PL-V040B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Steam Line Condensate Drain Control Valve	SGS-PL-V086A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Line Condensate Drain Control Valve	SGS-PL-V086B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Main Feedwater Isolation Valve	SGS-PL-V057A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Main Feedwater Isolation Valve	SGS-PL-V057B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is

Table 2.2.4-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
Startup Feedwater Isolation Motor-operated Valve	SGS-PL-V067A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Startup Feedwater Isolation Motor-operated Valve	SGS-PL-V067B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Steam Generator Blowdown Isolation Valve	SGS-PL-V074A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Generator Blowdown Isolation Valve	SGS-PL-V074B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Generator Blowdown Isolation Valve	SGS-PL-V075A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Generator Blowdown Isolation Valve	SGS-PL-V075B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Power-operated Relief Valve	SGS-PL-V233A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Power-operated Relief Valve	SGS-PL-V233B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
226	2.2.04.05a.i	5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.2.4-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.2.4-1 is located on the Nuclear Island.
227	2.2.04.05a.ii	5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
228	2.2.04.05a.iii	5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
229	2.2.04.05b	5.b) Each of the lines identified in Table 2.2.4-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report concluding that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.2.4-2 for which functional capability is required meets the requirements for functional capability.
230	2.2.04.06	6. Each of the as-built lines identified in Table 2.2.4-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built SGS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

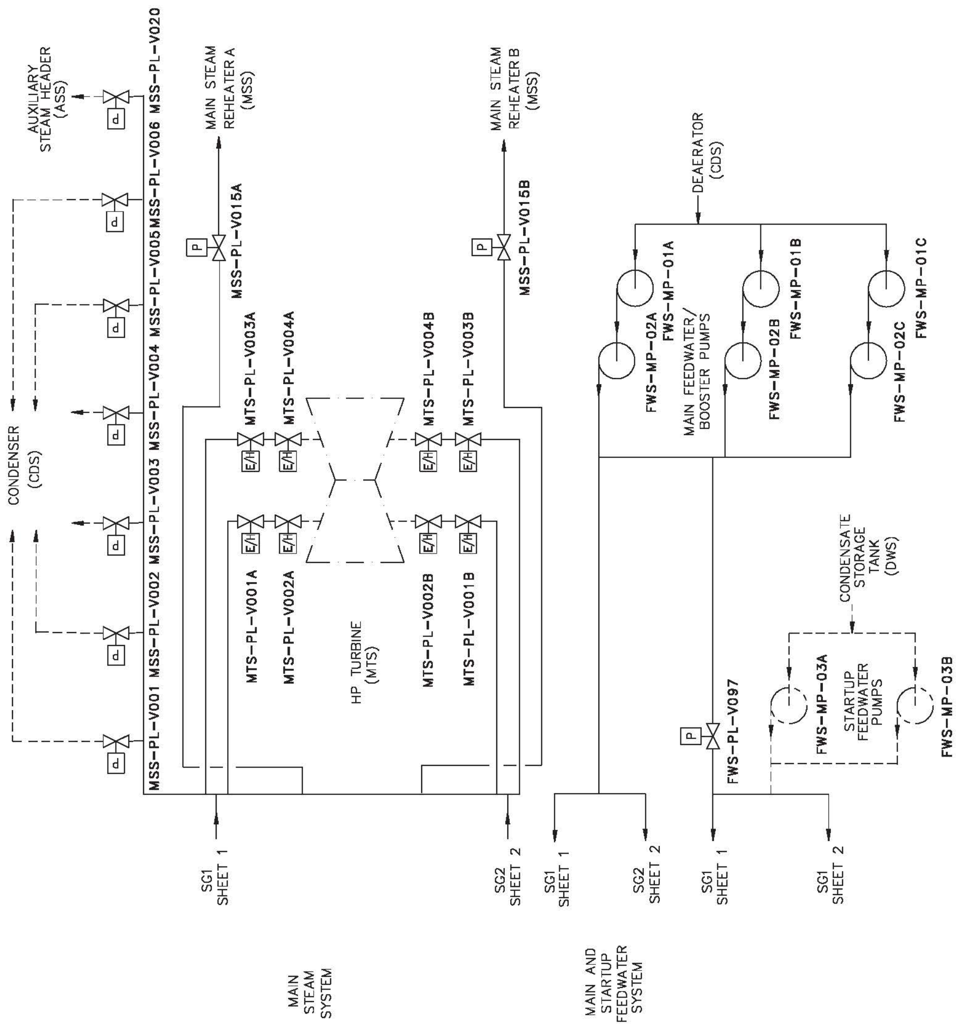

Figure 2.2.4-1 (Sheet 3 of 3)
Steam Generator System

Table 2.2.5-5 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
275	2.2.05.10	10. After loss of motive power, the remotely operated valves identified in Table 2.2.5-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.5-1 assumes the indicated loss of motive power position.
276	2.2.05.11	11. Displays of the parameters identified in Table 2.2.5-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.2.5-3 can be retrieved in the MCR.
277	2.2.05.12	12. The background noise level in the MCR does not exceed 65 dB(A) at the operator workstations when VES is operating.	The as-built VES will be operated, and background noise levels in the MCR will be measured at the operator work stations with the plant not operating.	The background noise level in the MCR does not exceed 65 dB(A) at the operator work stations when the VES is operating.

Table 2.2.5-6		
Component Name	**Tag Number**	**Component Location**
Emergency Air Storage Tank 01	VES-MT-01	Auxiliary Building
Emergency Air Storage Tank 02	VES-MT-02	Auxiliary Building
Emergency Air Storage Tank 03	VES-MT-03	Auxiliary Building
Emergency Air Storage Tank 04	VES-MT-04	Auxiliary Building
Emergency Air Storage Tank 05	VES-MT-05	Auxiliary Building
Emergency Air Storage Tank 06	VES-MT-06	Auxiliary Building
Emergency Air Storage Tank 07	VES-MT-07	Auxiliary Building
Emergency Air Storage Tank 08	VES-MT-08	Auxiliary Building
Emergency Air Storage Tank 09	VES-MT-09	Auxiliary Building
Emergency Air Storage Tank 10	VES-MT-10	Auxiliary Building
Emergency Air Storage Tank 11	VES-MT-11	Auxiliary Building
Emergency Air Storage Tank 12	VES-MT-12	Auxiliary Building
Emergency Air Storage Tank 13	VES-MT-13	Auxiliary Building
Emergency Air Storage Tank 14	VES-MT-14	Auxiliary Building
Emergency Air Storage Tank 15	VES-MT-15	Auxiliary Building
Emergency Air Storage Tank 16	VES-MT-16	Auxiliary Building

Table 2.3.2-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
CVS Zinc Injection Containment Isolation Valve ORC	CVS-PL-V092	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Zinc Injection Containment Isolation Valve IRC	CVS-PL-V094	Yes	Yes	Yes	Yes / Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Zinc Addition Line Ctmt Isol Thermal Relief Valve	CVS-PL-V098	Yes	Yes	No	- / -	-	-	Transfer Open/ Transfer Closed	-
CVS Makeup Line Containment Isolation Thermal Relief Valve	CVS-PL-V100	Yes	Yes	No	- / -	-	-	Transfer Open/ Transfer Closed	-
CVS Demineralized Water Isolation Valve	CVS-PL-V136A	Yes	Yes	Yes	Yes/No	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136B	Yes	Yes	Yes	Yes/No	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Hydrogen Injection Containment Isolation Check Valve IRC	CVS-PL-V217	Yes	Yes	No	- / -	-	-	Transfer Closed	-
CVS Hydrogen Injection Containment Isolation Valve ORC	CVS-PL-V219	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed

Note: Dash (-) indicates not applicable.

Table 2.3.2-2		
Line Name	**Line Number**	**ASME Code Section III**
CVS Purification Line	L001 L040	Yes Yes
CVS Resin Flush Containment Penetration Line	L026	Yes
CVS Purification Line Return	L038	Yes
CVS Pressurizer Auxiliary Spray Connection	L070 L071	Yes Yes
CVS Letdown Containment Penetration Line	L051	Yes
CVS Makeup Containment Penetration Line	L053	Yes
CVS Hydrogen Injection Containment Penetration Line	L213 L214 L217	Yes
CVS Zinc Injection Containment Penetration Line	L061	Yes
CVS Supply Line to Regenerative Heat Exchanger	L002	No
CVS Return Line from Regenerative Heat Exchanger	L018 L036	No Yes
CVS Line from Regenerative Heat Exchanger to Letdown Heat Exchanger	L003	No
CVS Lines from Letdown Heat Exchanger to Demin. Tanks	L004 L005 L072	No No No
CVS Lines from Demin Tanks to RC Filters and Connected Lines	L006[(1)] L007[(1)] L010[(1)] L011[(1)] L012 L015[(1)] L016[(1)] L020 L021 L022 L023[(1)] L024[(1)] L029 L037	No No No No No No No No No No No No No No

Table 2.3.2-2 (cont.)		
Line Name	**Line Number**	**ASME Code Section III**
CVS Lines from RC Filters to Regenerative Heat Exchanger	L030 L031 L034 L050 L073	No No No No No
CVS Resin Fill Lines to Demin. Tanks	L008[(1)] L013[(1)] L025[(1)]	No No No

Note:

1. Special seismic requirements include only the portion of piping normally exposed to RCS pressure. Piping beyond the first normally closed isolation valve is evaluated as seismic Category II piping extending to either an interface anchor, a rigid support following a six-way anchor, or the last seismic support of a rigidly supported region of the piping system as necessary to satisfy analysis requirements for piping connected to seismic Category I piping systems.

Table 2.3.2-3			
Equipment	**Tag No.**	**Display**	**Control Function**
CVS Makeup Pump A	CVS-MP-01A	Yes (Run Status)	Start
CVS Makeup Pump B	CVS-MP-01B	Yes (Run Status)	Start
Purification Flow Sensor	CVS-001	Yes	-
Purification Return Flow Sensor	CVS-025	Yes	-
CVS Purification Return Line (Position Indicator)	CVS-PL-V081	Yes	-
Auxiliary Spray Line Isolation Valve (Position Indicator)	CVS-PL-V084	Yes	-
Boric Acid Storage Tank Level Sensor	CVS-109	Yes	-
Boric Acid Flow Sensor	CVS-115	Yes	-
Makeup Blend Valve (Position Indicator)	CVS-PL-V115	Yes	-
CVS Demineralized Water Isolation Valve (Position Indicator)	CVS-PL-136A	Yes	-
CVS Demineralized Water Isolation Valve (Position Indicator)	CVS-PL-136B	Yes	-
Makeup Pump Discharge Flow Sensor	CVS-157	Yes	-
Makeup Flow Control Valve (Position Indicator)	CVS-PL-V157	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.3.6-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
RNS Suction from Cask Loading Pit Check Valve	RNS-PL-V056	Yes	Yes	No	-/-	No	-	No	-
RNS Pump Miniflow Air-Operated Isolation Valve	RNS-PL-V057A	Yes	Yes	Yes	No/No	No	No	No	Open
RNS Pump Miniflow Air-Operated Isolation Valve	RNS-PL-V057B	Yes	Yes	Yes	No/No	No	No	No	Open
RNS Return from Chemical and Volume Control System (CVS) Containment Isolation Valve	RNS-PL-V061	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed

Note: Dash (-) indicates not applicable.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
364	2.3.06.05b	5.b) Each of the lines identified in Table 2.3.6-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.6-2 for which functional capability is required meets the requirements for functional capability.
365	2.3.06.06	6. Each of the as-built lines identified in Table 2.3.6-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RNS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.
366	2.3.06.07a.i	7.a) The Class 1E equipment identified in Tables 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
367	2.3.06.07a.ii	7.a) The Class 1E equipment identified in Tables 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.6-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
368	2.3.06.07b	7.b) The Class 1E components identified in Table 2.3.6-1 are powered from their respective Class 1E division.	Testing will be performed on the RNS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.6-1 when the assigned Class 1E division is provided the test signal.

Table 2.3.10-1							
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Active Function**
WLS Containment Sump Level Sensor	WLS-034	No	Yes	No	No/No	No	-
WLS Containment Sump Level Sensor	WLS-035	No	Yes	No	No/No	No	-
WLS Containment Sump Level Sensor	WLS-036	No	Yes	No	No/No	No	-
WLS Drain from Passive Core Cooling System (PXS) Compartment A (Room 11206) Check Valve	WLS-PL-V071B	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from PXS Compartment A (Room 11206) Check Valve	WLS-PL-V072B	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from PXS Compartment B (Room 11207) Check Valve	WLS-PL-V071C	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from PXS Compartment B (Room 11207) Check Valve	WLS-PL-V072C	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from Chemical and Volume Control System (CVS) Compartment (Room 11209) Check Valve	WLS-PL-V071A	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from CVS Compartment (Room 11209) Check Valve	WLS-PL-V072A	Yes	Yes	No	-/-	No	Transfer Closed

Note: Dash (-) indicates not applicable.

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
440	2.3.10.05b	5.b) Each of the lines identified in Table 2.3.10-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.10-2 for which functional capability is required meets the requirements for functional capability.
441	2.3.10.06a	6.a) The WLS preserves containment integrity by isolation of the WLS lines penetrating the containment.	See ITAAC Table 2.2.1-3, items 1 and 7.	See ITAAC Table 2.2.1-3, items 1 and 7.
442	2.3.10.06b	6.b) Check valves in drain lines to the containment sump limit cross flooding of compartments.	Refer to item 9 in this table.	Refer to item 9 in this table.
443	2.3.10.07a.i	7.a) The WLS provides the nonsafety-related function of detecting leaks within containment to the containment sump.	i) Inspection will be performed for retrievability of the displays of containment sump level channels WLS-034, WLS-035, and WLS-036 in the MCR.	i) Nonsafety-related displays of WLS containment sump level channels WLS-034, WLS-035, and WLS-036 can be retrieved in the MCR.
444	2.3.10.07a.ii	7.a) The WLS provides the nonsafety-related function of detecting leaks within containment to the containment sump.	ii) Testing will be performed by adding water to the sump and observing display of sump level.	ii) A report exists and concludes that sump level channels WLS-034, WLS-035, and WLS-036 can detect a change of 1.75 ± 0.1 inches.
445	2.3.10.07b	7.b) The WLS provides the nonsafety-related function of controlling releases of radioactive materials in liquid effluents.	Tests will be performed to confirm that a simulated high radiation signal from the discharge radiation monitor, WLS-RE-229, causes the discharge isolation valve WLS-PL-V223 to close.	A simulated high radiation signal causes the discharge control isolation valve WLS-PL-V223 to close.
446	2.3.10.08	8. Controls exist in the MCR to cause the remotely operated valve identified in Table 2.3.10-3 to perform its active function.	Stroke testing will be performed on the remotely operated valve listed in Table 2.3.10-3 using controls in the MCR.	Controls in the MCR operate to cause the remotely operated valve to perform its active function.
447	2.3.10.09	9. The check valves identified in Table 2.3.10-1 perform an active safety-related function to change position as indicated in the table.	Exercise testing of the check valves with active safety functions identified in Table 2.3.10-1 will be performed under pre-operational test pressure, temperature and flow conditions.	Each check valve changes position as indicated on Table 2.3.10-1.

Table 2.3.14-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
479	2.3.14.03	3. The DWS CST provides the nonsafety-related function of water supply to the FWS startup feedwater pumps.	Inspection of the DWS CST will be performed.	The volume of the CST between the tank overflow and the startup feedwater pumps supply connection is greater than or equal to 325,000 gallons.
480	2.3.14.04	4. Displays of the parameters identified in Table 2.3.14-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of parameters in the MCR.	The displays identified in Table 2.3.14-1 can be retrieved in the MCR.

Table 2.3.14-3		
Component Name	**Tag No.**	**Component Location**
Demineralizer Water Storage Tank Degasification System Package	DWS-MS-01	Annex Building
Condensate Storage Tank Degasification System Package	DWS-MS-02	Turbine Building
Demineralized Water Storage Tank	DWS-MT-01	Yard
Condensate Storage Tank	DWS-MT-02	Yard

2.3.15 Compressed and Instrument Air System

Design Description

The compressed and instrument air system (CAS) consists of three subsystems: instrument air, service air, and high-pressure air. The instrument air subsystem supplies compressed air for air-operated valves and dampers. The service air subsystem supplies compressed air at outlets throughout the plant to power air-operated tools and is used as a motive force for air-powered pumps. The service air subsystem is also utilized as a supply source for breathing air. The high-pressure air subsystem supplies air to the main control room emergency habitability system (VES), the generator breaker package, and fire fighting apparatus recharge station.

The CAS is required for normal operation and startup of the plant.

The component locations of the CAS are as shown in Table 2.3.15-3.

1. The functional arrangement of the CAS is as described in the Design Description of this Section 2.3.15.
2. The CAS provides the safety-related function of preserving containment integrity by isolation of the CAS lines penetrating the containment.

Table 2.5.1-1 Functions Automatically Actuated by the DAS
1. Reactor and Turbine Trip on Low Wide-range Steam Generator Water Level or Low Pressurizer Water Level or High Hot Leg Temperature 2. Passive Residual Heat Removal (PRHR) Actuation and In-containment Refueling Water Storage Tank (IRWST) Gutter Isolation on Low Wide-range Steam Generator Water Level or on High Hot Leg Temperature 3. Core Makeup Tank (CMT) Actuation and Trip All Reactor Coolant Pumps on Low Wide-Range Steam Generator Water Level or Low Pressurizer Water Level 4. Isolation of Selected Containment Penetrations and Initiation of Passive Containment Cooling System (PCS) on High Containment Temperature

Table 2.5.1-2 Functions Manually Actuated by the DAS
1. Reactor and Turbine Trip 2. PRHR Actuation and IRWST Gutter Isolation 3. CMT Actuation and Trip All Reactor Coolant Pumps 4. First-stage Automatic Depressurization System (ADS) Valve Actuation 5. Second-stage ADS Valve Actuation 6. Third-stage ADS Valve Actuation 7. Fourth-stage ADS Valve Actuation 8. PCS Actuation 9. Isolation of Selected Containment Penetrations 10. Containment Hydrogen Igniter Actuation 11. IRWST Injection Actuation 12. Containment Recirculation Actuation 13. Actuate IRWST Drain to Containment

Table 2.5.1-3
DAS Sensors and Displays

Equipment Name	Tag Number
Reactor Coolant System (RCS) Hot Leg Temperature	RCS-300A
RCS Hot Leg Temperature	RCS-300B
Steam Generator 1 Wide-range Level	SGS-044
Steam Generator 1 Wide-range Level	SGS-045
Steam Generator 2 Wide-range Level	SGS-046
Steam Generator 2 Wide-range Level	SGS-047
Pressurizer Water Level	RCS-305A
Pressurizer Water Level	RCS-305B

2.6.3 Class 1E dc and Uninterruptible Power Supply System

Design Description

The Class 1E dc and uninterruptible power supply system (IDS) provides dc and uninterruptible ac electrical power for safety-related equipment during normal and off-normal conditions.

The IDS is as shown in Figure 2.6.3-1 and the component locations of the IDS are as shown in Table 2.6.3-4.

1. The functional arrangement of the IDS is as described in the Design Description of this Section 2.6.3.
2. The seismic Category I equipment identified in Table 2.6.3-1 can withstand seismic design basis loads without loss of safety function.
3. Separation is provided between Class 1E divisions, and between Class 1E divisions and non-Class 1E cables.
4. The IDS provides the following safety-related functions:
   a) The IDS provides electrical independence between the Class 1E divisions.
   b) The IDS provides electrical isolation between the non-Class 1E ac power system and the non-Class 1E lighting in the MCR.
   c) Each IDS 24-hour battery bank supplies a dc switchboard bus load for a period of 24 hours without recharging.
   d) Each IDS 72-hour battery bank supplies a dc switchboard bus load for a period of 72 hours without recharging.
   e) The IDS spare battery bank supplies a dc load equal to or greater than the most severe switchboard bus load for the required period without recharging.
   f) Each IDS 24-hour inverter supplies its ac load.
   g) Each IDS 72-hour inverter supplies its ac load.
   h) Each IDS 24-hour battery charger provides the protection and safety monitoring system (PMS) with two loss-of-ac input voltage signals.
   i) The IDS supplies an operating voltage at the terminals of the Class 1E motor-operated valves identified in subsections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.2, 2.3.6, and 2.7.1 that is greater than or equal to the minimum specified voltage.
5. The IDS provides the following nonsafety-related functions:
   a) Each IDS 24-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.
   b) Each IDS 72-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.
   c) Each IDS regulating transformer supplies an ac load when powered from the 480 V motor control center (MCC).

Table 2.6.3-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
608	2.6.03.04h	4.h) Each IDS 24-hour battery charger provides the PMS with two loss-of-ac input voltage signals.	Testing will be performed by simulating a loss of input voltage to each 24-hour battery charger.	Two PMS input signals exist from each 24-hour battery charger indicating loss of ac input voltage when the loss-of-input voltage condition is simulated.
609	2.6.03.04i	4.i) The IDS supplies an operating voltage at the terminals of the Class 1E motor operated valves identified in subsections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.2, 2.3.6, and 2.7.1 that is greater than or equal to the minimum specified voltage.	Testing will be performed by stroking each specified motor-operated valve and measuring the terminal voltage at the motor starter input terminals with the motor operating. The battery terminal voltage will be no more than 210 Vdc during the test.	The motor starter input terminal voltage is greater than or equal 200 Vdc with the motor operating.
610	2.6.03.05a	5.a) Each IDS 24-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.	Testing of each as-built 24-hour battery charger will be performed by applying a simulated or real load, or a combination of simulated or real loads.	Each 24-hour battery charger provides an output current of at least 150 A with an output voltage in the range 210 to 280 V.
611	2.6.03.05b	5.b) Each IDS 72-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.	Testing of each 72-hour as-built battery charger will be performed by applying a simulated or real load, or a combination of simulated or real loads.	Each 72-hour battery charger provides an output current of at least 125 A with an output voltage in the range 210 to 280 V.
612	2.6.03.05c	5.c) Each IDS regulating transformer supplies an ac load when powered from the 480 V MCC.	Testing of each as-built regulating transformer will be performed by applying a simulated or real load, or a combination of simulated or real loads, equivalent to a resistive load greater than 30 kW when powered from the 480 V MCC.	Each regulating transformer supplies a line-to-line output voltage of 208 ± 2% V.
613	2.6.03.05d.i	5.d) The IDS Divisions B and C regulating transformers supply their post-72-hour ac loads when powered from an ancillary diesel generator.	Inspection of the as-built system will be performed.	i) Ancillary diesel generator 1 is electrically connected to regulating transformer IDSC-DT-1
614	2.6.03.05d.ii	5.d) The IDS Divisions B and C regulating transformers supply their post-72-hour ac loads when powered from an ancillary diesel generator.	Inspection of the as-built system will be performed.	ii) Ancillary diesel generator 2 is electrically connected to regulating transformer IDSB-DT-1.

Table 2.6.3-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
619	2.6.03.10	10. The IDS electrical distribution system cables are rated to withstand fault currents for the time required to clear the fault from its power source.	Analyses for the as-built IDS dc electrical distribution system to determine fault currents will be performed.	Analyses for the as-built IDS dc electrical distribution system exist and conclude that the IDS dc electrical distribution system cables will withstand the analyzed fault currents, as determined by manufacturer's ratings, for the time required to clear the fault from its power source as determined by the circuit interrupting device coordination analyses.
620	2.6.03.11	11. Displays of the parameters identified in Table 2.6.3-2 can be retrieved in the MCR.	Inspection will be performed for retrievability of the displays identified in Table 2.6.3-2 in the MCR.	Displays identified in Table 2.6.3-2 can be retrieved in the MCR.

Table 2.6.3-4		
Component Name	**Tag No.**	**Component Location**
Division A 250 Vdc 24-Hour Battery Bank	IDSA-DB-1	Auxiliary Building
Division B 250 Vdc 24-Hour Battery Bank 1	IDSB-DB-1	Auxiliary Building
Division B 250 Vdc 72-Hour Battery Bank 2	IDSB-DB-2	Auxiliary Building
Division C 250 Vdc 24-Hour Battery Bank 1	IDSC-DB-1	Auxiliary Building
Division C 250 Vdc 72-Hour Battery Bank 2	IDSC-DB-2	Auxiliary Building
Division D 250 Vdc 24-Hour Battery Bank	IDSD-DB-1	Auxiliary Building
Spare 250 Vdc Battery Bank	IDSS-DB-1	Auxiliary Building
Division A 24-Hour Battery Charger 1	IDSA-DC-1	Auxiliary Building
Division B 24-Hour Battery Charger 1	IDSB-DC-1	Auxiliary Building
Division B 72-Hour Battery Charger 2	IDSB-DC-2	Auxiliary Building
Division C 24-Hour Battery Charger 1	IDSC-DC-1	Auxiliary Building
Division C 72-Hour Battery Charger 2	IDSC-DC-2	Auxiliary Building
Division D 24-Hour Battery Charger 1	IDSD-DC-1	Auxiliary Building
Spare Battery Charger 1	IDSS-DC-1	Auxiliary Building
Division A 250 Vdc Distribution Panel	IDSA-DD-1	Auxiliary Building

3.3 Buildings

Design Description

The nuclear island structures include the containment (the steel containment vessel and the containment internal structure) and the shield and auxiliary buildings. The containment, shield and auxiliary buildings are structurally integrated on a common basemat which is embedded below the finished plant grade level. The containment vessel is a cylindrical welded steel vessel with elliptical upper and lower heads, supported by embedding a lower segment between the containment internal structures concrete and the basemat concrete. The containment internal structure is reinforced concrete with structural modules used for some walls and floors. The shield building cylinder is a composite steel and concrete (SC) structure except for the portion surrounded by the auxiliary building, which is reinforced concrete (RC). The shield building, in conjunction with the internal structures of the containment building, provides shielding for the reactor coolant system and the other radioactive systems and components housed in the containment. The shield building roof is a reinforced concrete structure containing an integral, steel lined passive containment cooling water storage tank. The auxiliary building is reinforced concrete and houses the safety-related mechanical and electrical equipment located outside the containment and shield buildings.

The portion of the annex building adjacent to the nuclear island is a structural steel and reinforced concrete seismic Category II structure and houses the control support area, non-1E electrical equipment, and hot machine shop.

The radwaste building is a steel framed structure and houses the low level waste processing and storage.

The turbine building is a non-safety related structure that houses the main turbine generator and the power conversion cycle equipment and auxiliaries. There is no safety-related equipment in the turbine building. The turbine building is located on a separate foundation. The turbine building structure is adjacent to the auxiliary building to the south and the annex building to the south and east. The turbine building consists of two separate superstructures, the first bay and the main area, both supported on a common reinforced concrete basemat. The first bay, next to the auxiliary building, consists of a combination of reinforced concrete walls and steel framing with reinforced concrete and steel grated floors. It is classified as a seismic Category II structure due to its immediate proximity to the auxiliary building. The main area of the turbine building, immediately to the north of the first bay, is a steel framed building with reinforced concrete and steel grated floors. It is classified as a non-seismic structure. The non-seismic portion of the turbine building is designed with a mix of concentrically and eccentrically braced framing.

The diesel generator building is a non-safety related structure that houses the two standby diesel engine powered generators and the power conversion cycle equipment and auxiliaries. There is no safety-related equipment in the diesel generator building. The diesel generator building is located on a separate foundation at a distance from the nuclear island structures.

The plant gas system (PGS) provides hydrogen, carbon dioxide, and nitrogen gases to the plant systems as required. The component locations of the PGS are located in the yard areas.

c) The walls on the outside of the packaged waste storage room in the radwaste building provide shielding from stored waste.

5. a) Exterior walls and the basemat of the nuclear island have a water barrier up to site grade.

   b) The boundaries between mechanical equipment rooms and the electrical and instrumentation and control (I&C) equipment rooms of the auxiliary building as identified in Table 3.3-2 are designed to prevent flooding of rooms that contain safety-related equipment up to the maximum flood level for each room defined in Table 3.3-2.

   c) The boundaries between the following rooms, which contain safety-related equipment – passive core cooling system (PXS) valve/accumulator room A (11206), PXS valve/accumulator room B (11207), and chemical and volume system (CVS) room (11209) – are designed to prevent flooding between these rooms.

6. a) The radiologically controlled area of the auxiliary building between floor elevations 66′-6″ and 82′-6″ contains adequate volume to contain the liquid volume of faulted liquid radwaste system (WLS) storage tanks. The available room volumes of the radiologically controlled area of the auxiliary building between floor elevations 66′-6″ and 82′-6″ exceeds the volume of the liquid radwaste storage tanks (WLS-MT-05A, MT-05B, MT-06A, MT-06B, MT-07A, MT-07B, MT-07C, MT-11).

   b) The radwaste building packaged waste storage room has a volume greater than or equal to 1293 cubic feet.

7. a) Class 1E electrical cables, fiber optic cables associated with only one division, and raceways are identified according to applicable color-coded Class 1E divisions.

   b) Class 1E divisional electrical cables and communication cables associated with only one division are routed in their respective divisional raceways.

   c) Separation is maintained between Class 1E divisions in accordance with the fire areas as identified in Table 3.3-3.

   d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables.

   e) Class 1E communication cables which interconnect two divisions are routed and separated such that the Protection and Safety Monitoring System voting logic is not defeated by the loss of any single raceway or fire area.

8. Systems, structures, and components identified as essential targets are protected from the dynamic and environmental effects of postulated pipe ruptures.

9. The reactor cavity sump has a minimum concrete thickness as shown on Table 3.3-5 between the bottom of the sump and the steel containment.

10. The shield building roof and the passive containment cooling system (PCS) storage tank support and retain the PCS water. The passive containment cooling system tank has a stainless steel liner which provides a barrier on the inside surfaces of the tank. Leak chase channels are provided over the tank boundary liner welds.

Table 3.3-1
Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building[(1)]

Wall or Section Description	Column Lines[(7)]	Floor Elevation or Elevation Range[(7)(8)]	Concrete Thickness[(2)(3)(4)(5)(9)]	Applicable Radiation Shielding Wall (Yes/No)
Labyrinth Wall between Column Line 7.3 and 9.2 and J to K	J to K	From 117'-6" to 135'-3"	2'-0"	Yes
Auxiliary Area Basemat	From 7.3-11 and I-Q, excluding shield building	From 60'-6" to 66'-6"	6'-0"	No
Floor	From 5 to 10'-6" south of 7.3 and I to shield building wall	100'-0"	2'-0"	Yes
Floor	From 10'-6" south of 7.3 to 7.3 and I to shield building wall	100'-0"	3'-0"	Yes
Floor	From K to L and shield building wall to column line 10	100'-0"	0'-9"	Yes
Main Control Room Floor	From 9.2 to 11 and I to L	117'-6"	2'-0"	Yes
Floor	Bounded by shield bldg, 7.3, J, 9.2 and L	117'-6"	2'-0"	Yes
Floor	From shield building to 11 and L to Q	117'-6"	2'-0"	Yes
Floor	From 5 to 7.3 and from I to intersection with shield building wall	135'-3"	0'-9"	Yes
Annex Building				
Column line 2 wall	From E to H	From 107'-2" to 135'-3"	19 3/4"	Yes
Column line 4 wall	From E to H	From 107'-2" to 162'-6" & 166'-0"	2'-0"	Yes
N-S Shield Wall between E and F	From 2 to 4	From 107'-2" to 135'-3"	1'-0"	Yes
Column line 4.1 wall	From E to H	From 107'-2" to 135'-3"	2'-0"	Yes
N-S Labyrinth Wall between column line 7.8 and 9 and G to H	Not Applicable	From 100'-0" to 112'-0"	2'-0"	Yes
E-W Labyrinth Wall between column line 7.1 and 7.8 and G to H	Not Applicable	From 100'-0" to 112'-0"	2'-0"	Yes
Column Line 9 wall	From E to connecting wall between G and H	From 107'-2" to 117'-6"	2'-0"	Yes
Column Line E wall	From 9 to 13	From 100'-0" to 135'-3"	2'-0"	Yes
Column Line 13 wall	From E to I.1	From 100'-0" to 135'-3"	2'-0"	Yes
Column Line I.1 wall	From 11.09 to 13	From 100'-0" to 135'-3"	2'-0"	Yes
Corridor Wall between G and H	From 9 to near 13	From 100'-0" to 117'-6"	1'-6"	Yes

Table 3.3-6 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
766	3.3.00.02a.ii.c	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.c) A report exists that concludes that as-built concrete thicknesses of the non-radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1.
767	3.3.00.02a.ii.d	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.d) A report exists that concludes that the as-built concrete thicknesses of the radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1.
768	3.3.00.02a.ii.e	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.e) A report exists that concludes that the as-built concrete thicknesses of the annex building sections conform with the building sections defined in Table 3.3-1.
769	3.3.00.02a.ii.f	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.f) A report exists that concludes that the as-built concrete thicknesses of the turbine building sections conform to the building sections defined in Table 3.3-1.
770	3.3.00.02b	2.b) Site grade level is located relative to floor elevation 100'-0" per Table 3.3-5.	Inspection of the as-built site grade will be conducted.	Site grade is consistent with design plant grade within the dimension defined on Table 3.3-5.
771	3.3.00.02c	2.c) The containment and its penetrations are designed and constructed to ASME Code Section III, Class MC.[1]	See ITAAC Table 2.2.1-3, Items 2.a, 2.b, 3.a, and 3.b.	See ITAAC Table 2.2.1-3, Items 2.a, 2.b, 3.a, and 3.b.

1. Containment isolation devices are addressed in subsection 2.2.1, Containment System.

Table 3.3-6 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
786	3.3.00.05c	5.c) The boundaries between the following rooms, which contain safety-related equipment – PXS valve/accumulator room A (11206), PXS valve/accumulator room B (11207), and CVS room (11209) – are designed to prevent flooding between these rooms.	An inspection of the boundaries between the following rooms which contain safety-related equipment – PXS Valve/ Accumulator Room A (11206), PXS Valve/Accumulator Room B (11207), and CVS Room (11209) – will be performed.	A report exists that confirms that flooding of the PXS Valve/ Accumulator Room A (11206), and the PXS Valve/ Accumulator Room B (11207) is prevented to a maximum flood level as follows: PXS A 110'-2", PXS B 110'-1"; and of the CVS room (11209) to a maximum flood level of 110'-0".
787	3.3.00.06a	6.a) The available room volumes of the radiologically controlled area of the auxiliary building between floor elevations 66'-6" and 82'-6" exceed the volume of the liquid radwaste storage tanks (WLS-MT-05A, MT-05B, MT-06A, MT-06B, MT-07A, MT-07B, MT-07C, MT-11).	An inspection will be performed of the as-built radiologically controlled area of the auxiliary building between floor elevations 66'-6" and 82'-6" to define volume.	A report exists and concludes that the as-built available room volumes of the radiologically controlled area of the auxiliary building between floor elevations 66'-6" and 82'-6" exceed the volume of the liquid radwaste storage tanks (WLS-MT-05A, MT-05B, MT-06A, MT-06B, MT-07A, MT-07B, MT-07C, MT-11).
788	3.3.00.06b	6.b) The radwaste building package waste storage room has a volume greater than or equal to 1293 cubic feet.	An inspection of the radwaste building packaged waste storage room (50352) is performed.	The volume of the radwaste building packaged waste storage room (50352) is greater than or equal to 1293 cubic feet.
789	3.3.00.07aa	7.a) Class 1E electrical cables, communication cables associated with only one division, and raceways are identified according to applicable color-coded Class 1E divisions.	Inspections of the as-built Class 1E cables and raceways will be conducted.	a) Class 1E electrical cables, and communication cables inside containment associated with only one division, and raceways are identified by the appropriate color code.
790	3.3.00.07ab	7.a) Class 1E electrical cables, communication cables associated with only one division, and raceways are identified according to applicable color-coded Class 1E divisions.	Inspections of the as-built Class 1E cables and raceways will be conducted.	b) Class 1E electrical cables, and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division, and raceways are identified by the appropriate color code.

Table 3.7-1 Risk-Significant Components	
Equipment Name	**Tag No.**
Air Cooled Chillers	VWS-MS-02, -03
Liquid Radwaste System (WLS)	
Sump Containment Isolation Valves	WLS-PL-V055 WLS-PL-V057
Onsite Standby Power System (ZOS)	
Engine Room Exhaust Fans	VZS-MY-V01A/B, -V02A/B
Onsite Diesel Generators	ZOS-MS-05A/B

Note: Dash (-) indicates not applicable.

Table 3.7-2 PLS D-RAP Control Functions
CVS Reactor Makeup
RNS Reactor Injection from cask loading pit
Startup Feedwater from CST
Spent Fuel Cooling
Component Cooling of RNS and SFS Heat Exchangers
Service Water Cooling of CCS Heat Exchangers
Onsite Diesel Generators
Hydrogen Igniters

ATTACHMENT 1 TO LICENSE AMENDMENT NO. 30

TO FACILITY COMBINED LICENSE NO. NPF-92

DOCKET NO. 52-026

Replace the following pages of the Facility Combined License No NPF-92 with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Combined License No. NPF-92

REMOVE	INSERT
7	7

Facility Combined License No. NPF-92
Appendix C – Inspections, Tests, Analyses and Acceptance Criteria

REMOVE	INSERT
C-82	C-82
C-112	C-112
C-130	C-130
C-142	C-142
C-149	C-149
C-150	C-150
C-159	C-159
C-166	C-166
C-179	C-179
C-190	C-190
C-191	C-191
C-192	C-192
C-219	C-219
C-224	C-224
C-252	C-252
C-255	C-255
C-270	C-270
C-286	C-286

Facility Combined License No. NPF-92

Appendix C – Inspections, Tests, Analyses and Acceptance Criteria (continued)

REMOVE	INSERT
C-334	C-334
C-342	C-342
C-344	C-344
C-408	C-408
C-410	C-410
C-418	C-418
C-425	C-425
C-429	C-429
C-455	C-455

(7) Reporting Requirements

(a) Within 30 days of a change to the initial test program described in FSAR Section 14, Initial Test Program, made in accordance with 10 CFR 50.59 or in accordance with 10 CFR Part 52, Appendix D, Section VIII, "Processes for Changes and Departures," SNC shall report the change to the Director of NRO, or the Director's designee, in accordance with 10 CFR 50.59(d).

(b) SNC shall report any violation of a requirement in Section 2.D.(3), Section 2.D.(4), Section 2.D.(5), and Section 2.D.(6) of this license within 24 hours. Initial notification shall be made to the NRC Operations Center in accordance with 10 CFR 50.72, with written follow up in accordance with 10 CFR 50.73.

(8) Incorporation

The Technical Specifications, Environmental Protection Plan, and ITAAC in Appendices A, B, and C, respectively of this license, as revised through Amendment No. 30, are hereby incorporated into this license.

(9) Technical Specifications

The technical specifications in Appendix A to this license become effective upon a Commission finding that the acceptance criteria in this license (ITAAC) are met in accordance with 10 CFR 52.103(g).

(10) Operational Program Implementation

SNC shall implement the programs or portions of programs identified below, on or before the date SNC achieves the following milestones:

(a) Environmental Qualification Program implemented before initial fuel load;

(b) Reactor Vessel Material Surveillance Program implemented before initial criticality;

(c) Preservice Testing Program implemented before initial fuel load;

(d) Containment Leakage Rate Testing Program implemented before initial fuel load;

(e) Fire Protection Program

1. The fire protection measures in accordance with Regulatory Guide (RG) 1.189 for designated storage building areas (including adjacent fire areas that could affect the storage area) implemented before initial receipt

Table 2.1.3-3		
Component Name	**Tag No.**	**Component Location**
Source Range Detectors (4)	RXS-JE-NE001A/NE001B/ NE001C/NE001D	Containment
Intermediate Range Detectors (4)	RXS-JE-NE002A/NE002B/ NE002C/NE002D	Containment
Power Range Detectors – Lower (4)	RXS-JE-NE003A/NE003B/ NE003C/NE003D	Containment
Power Range Detectors – Upper (4)	RXS-JE-NE004A/NE004B/ NE004C/NE004D	Containment

Table 2.1.3-4
Key Dimensions and Acceptable Variations of the Reactor Vessel and Internals
(Figure 2.1.3-2 and Figure 2.1.3-3)

Description	Dimension or Elevation (inches)	Nominal Value (inches)	Acceptable Variation (inches)
RV inside diameter at beltline (inside cladding)	A	159.0	+1.0/-1.0
RV wall thickness at beltline (without cladding)	B	8.4	+1.0/-0.12
RV wall thickness at bottom head (without cladding)	C	6.0	+1.0/-0.12
RV inlet nozzle inside diameter at safe end	D	22.0	+0.35/-0.10
RV outlet nozzle inside diameter at safe end	E	31.0	+0.35/-0.10
Elevation from RV mating surface to centerline of inlet nozzle	F	62.5	+0.25/-0.25
Elevation from RV mating surface to centerline of outlet nozzle	G	80.0	+0.25/-0.25
Elevation from RV mating surface to centerline of direct vessel injection nozzle	H	100.0	+0.25/-0.25
Elevation from RV mating surface to inside of RV bottom head (inside cladding)	I	397.59	+1.0/-0.50
Elevation from RV mating surface to top of lower core support plate	J	327.3	+0.50/-0.50
Separation distance between bottom of upper core plate and top of lower core support with RV head in place	K	189.8	+0.20/-0.20

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
143	2.2.02.07e.i	7.e) The PCS provides a flow path for long-term water makeup to the PCCWST.	i) See item 1 in this table.	i) See item 1 in this table.
144	2.2.02.07e.ii	7.e) The PCS provides a flow path for long-term water makeup to the PCCWST.	ii) Testing will be performed to measure the delivery rate from the long-term makeup connection to the PCCWST.	ii) With a water supply connected to the PCS long-term makeup connection, each PCS recirculation pump delivers greater than or equal to 100 gpm when tested separately.
145	2.2.02.07f.i	7.f) The PCS provides a flow path for long-term water makeup from the PCCWST to the spent fuel pool.	i) Testing will be performed to measure the delivery rate from the PCCWST to the spent fuel pool.	i) With the PCCWST water level at 27.4 ft + 0.2, - 0.0 ft above the bottom of the tank, the flow path from the PCCWST to the spent fuel pool delivers greater than or equal to 118 gpm.
146	2.2.02.07f.ii	7.f) The PCS provides a flow path for long-term water makeup from the PCCWST to the spent fuel pool.	ii) Inspection of the PCCWST will be performed.	ii) The volume of the PCCWST is greater than 756,700 gallons.
147	2.2.02.08a	8.a) The PCCAWST contains an inventory of cooling water sufficient for PCS containment cooling from hour 72 through day 7.	Inspection of the PCCAWST will be performed.	The volume of the PCCAWST is greater than 780,000 gallons.
148	2.2.02.08b	8.b) The PCS delivers water from the PCCAWST to the PCCWST and spent fuel pool simultaneously.	Testing will be performed to measure the delivery rate from the PCCAWST to the PCCWST and spent fuel pool simultaneously.	With PCCAWST aligned to the suction of the recirculation pumps, each pump delivers greater than or equal to 100 gpm to the PCCWST and 35 gpm to the spent fuel pool simultaneously when each pump is tested separately.
149	2.2.02.08c	8.c) The PCCWST includes a water inventory for the fire protection system.	See ITAAC Table 2.3.4-2, items 1 and 2.	See ITAAC Table 2.3.4-2, items 1 and 2.
150	2.2.02.09	9. Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR.
151	2.2.02.10a	10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.2-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.2.2-1 using the controls in the MCR.	Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.2-1 to perform active functions.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
169	2.2.03.06	6. Each of the as-built lines identified in Table 2.2.3-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built PXS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.
170	2.2.03.07a.i	7.a) The Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
171	2.2.03.07a.ii	7.a) The Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.3-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
172	2.2.03.07b	7.b) The Class 1E components identified in Table 2.2.3-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.3-1 when the assigned Class 1E division is provided the test signal.
173	2.2.03.07c	7.c) Separation is provided between PXS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	See ITAAC Table 3.3-6, item 7.d.	See ITAAC Table 3.3-6, item 7.d.

Table 2.2.3-6		
Equipment	**Tag No.**	**Function**
Hot Leg Sample Isolation Valves	PSS-PL-V001A/B	Transfer open
Liquid Sample Line Containment Isolation Valves IRC	PSS-PL-V010A/B	Transfer open
Containment Pressure Sensors	PCS-012, 013, 014	Sense pressure
RCS Wide Range Pressure Sensors	RCS-140A, B, C, D	Sense pressure
SG1 Wide Range Level Sensors	SGS-011, 012, 015, 016	Sense level
SG2 Wide Range Level Sensors	SGS-013, 014, 017, 018	Sense level
Hydrogen Monitors	VLS-001, 002, 003	Sense concentration
Hydrogen Igniters	VLS-EH-01 through 64	Ignite hydrogen
Containment Electrical Penetrations	P01, P02, P03, P06, P07, P09, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32	Maintain containment boundary

Table 2.2.4-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
Power-operated Relief Valve Block Motor-operated Valve Steam Generator 02	SGS-PL-V027B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Steam Line Condensate Drain Isolation Valve	SGS-PL-V036A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Line Condensate Drain Isolation Valve	SGS-PL-V036B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Main Steam Line Isolation Valve	SGS-PL-V040A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Main Steam Line Isolation Valve	SGS-PL-V040B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Steam Line Condensate Drain Control Valve	SGS-PL-V086A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Line Condensate Drain Control Valve	SGS-PL-V086B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Main Feedwater Isolation Valve	SGS-PL-V057A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Main Feedwater Isolation Valve	SGS-PL-V057B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is

Table 2.2.4-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
Startup Feedwater Isolation Motor-operated Valve	SGS-PL-V067A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Startup Feedwater Isolation Motor-operated Valve	SGS-PL-V067B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	As Is
Steam Generator Blowdown Isolation Valve	SGS-PL-V074A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Generator Blowdown Isolation Valve	SGS-PL-V074B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Generator Blowdown Isolation Valve	SGS-PL-V075A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Steam Generator Blowdown Isolation Valve	SGS-PL-V075B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Power-operated Relief Valve	SGS-PL-V233A	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
Power-operated Relief Valve	SGS-PL-V233B	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed

Table 2.2.4-4
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
226	2.2.04.05a.i	5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.2.4-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.2.4-1 is located on the Nuclear Island.
227	2.2.04.05a.ii	5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
228	2.2.04.05a.iii	5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
229	2.2.04.05b	5.b) Each of the lines identified in Table 2.2.4-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report concluding that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.2.4-2 for which functional capability is required meets the requirements for functional capability.
230	2.2.04.06	6. Each of the as-built lines identified in Table 2.2.4-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built SGS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

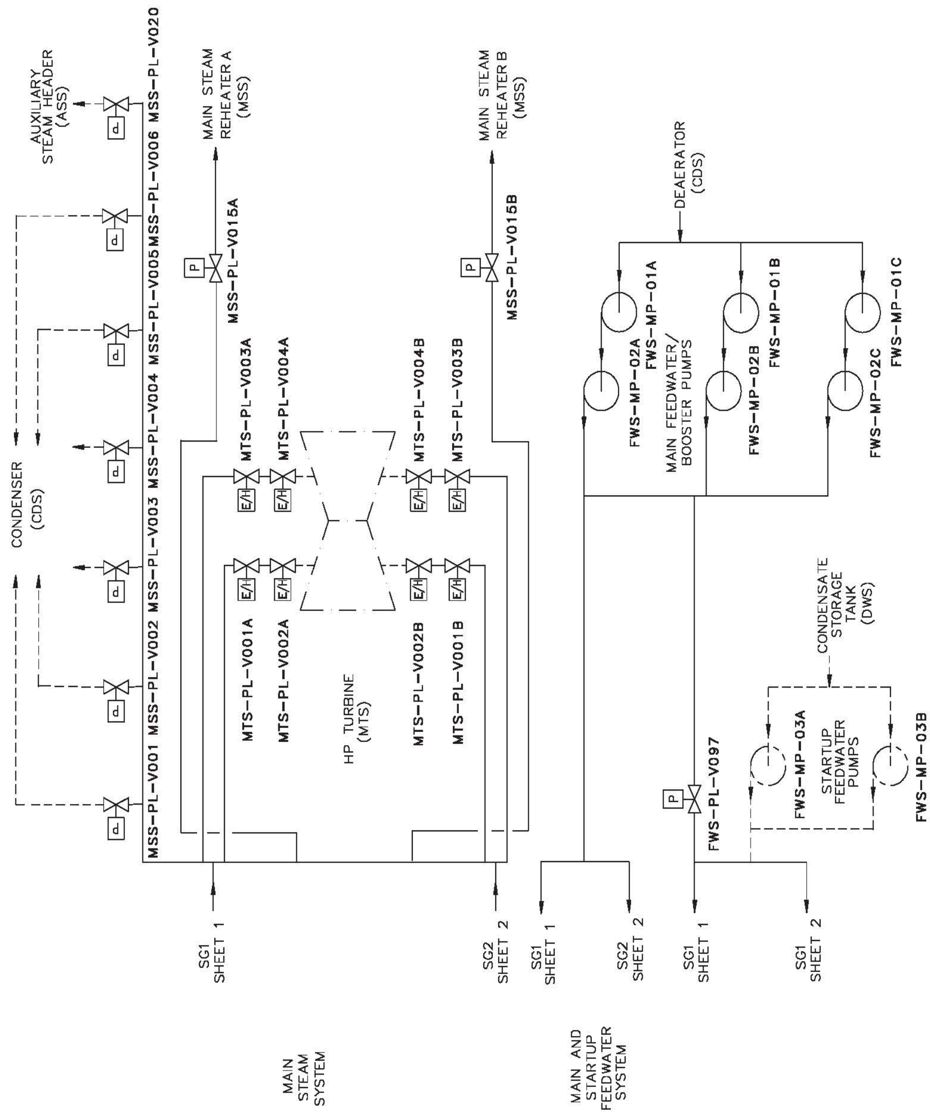

Figure 2.2.4-1 (Sheet 3 of 3)
Steam Generator System

Table 2.2.5-5 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
275	2.2.05.10	10. After loss of motive power, the remotely operated valves identified in Table 2.2.5-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.5-1 assumes the indicated loss of motive power position.
276	2.2.05.11	11. Displays of the parameters identified in Table 2.2.5-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.2.5-3 can be retrieved in the MCR.
277	2.2.05.12	12. The background noise level in the MCR does not exceed 65 dB(A) at the operator workstations when VES is operating.	The as-built VES will be operated, and background noise levels in the MCR will be measured at the operator work stations with the plant not operating.	The background noise level in the MCR does not exceed 65 dB(A) at the operator work stations when the VES is operating.

Table 2.2.5-6		
Component Name	**Tag Number**	**Component Location**
Emergency Air Storage Tank 01	VES-MT-01	Auxiliary Building
Emergency Air Storage Tank 02	VES-MT-02	Auxiliary Building
Emergency Air Storage Tank 03	VES-MT-03	Auxiliary Building
Emergency Air Storage Tank 04	VES-MT-04	Auxiliary Building
Emergency Air Storage Tank 05	VES-MT-05	Auxiliary Building
Emergency Air Storage Tank 06	VES-MT-06	Auxiliary Building
Emergency Air Storage Tank 07	VES-MT-07	Auxiliary Building
Emergency Air Storage Tank 08	VES-MT-08	Auxiliary Building
Emergency Air Storage Tank 09	VES-MT-09	Auxiliary Building
Emergency Air Storage Tank 10	VES-MT-10	Auxiliary Building
Emergency Air Storage Tank 11	VES-MT-11	Auxiliary Building
Emergency Air Storage Tank 12	VES-MT-12	Auxiliary Building
Emergency Air Storage Tank 13	VES-MT-13	Auxiliary Building
Emergency Air Storage Tank 14	VES-MT-14	Auxiliary Building
Emergency Air Storage Tank 15	VES-MT-15	Auxiliary Building
Emergency Air Storage Tank 16	VES-MT-16	Auxiliary Building

Table 2.3.2-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
CVS Zinc Injection Containment Isolation Valve ORC	CVS-PL-V092	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Zinc Injection Containment Isolation Valve IRC	CVS-PL-V094	Yes	Yes	Yes	Yes / Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Zinc Addition Line Ctmt Isol Thermal Relief Valve	CVS-PL-V098	Yes	Yes	No	- / -	-	-	Transfer Open/ Transfer Closed	-
CVS Makeup Line Containment Isolation Thermal Relief Valve	CVS-PL-V100	Yes	Yes	No	- / -	-	-	Transfer Open/ Transfer Closed	-
CVS Demineralized Water Isolation Valve	CVS-PL-V136A	Yes	Yes	Yes	Yes/No	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Demineralized Water Isolation Valve	CVS-PL-V136B	Yes	Yes	Yes	Yes/No	Yes (Valve Position)	Yes	Transfer Closed	Closed
CVS Hydrogen Injection Containment Isolation Check Valve IRC	CVS-PL-V217	Yes	Yes	No	- / -	-	-	Transfer Closed	-
CVS Hydrogen Injection Containment Isolation Valve ORC	CVS-PL-V219	Yes	Yes	Yes	Yes / Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed

Note: Dash (-) indicates not applicable.

Table 2.3.2-2		
Line Name	**Line Number**	**ASME Code Section III**
CVS Purification Line	L001 L040	Yes Yes
CVS Resin Flush Containment Penetration Line	L026	Yes
CVS Purification Line Return	L038	Yes
CVS Pressurizer Auxiliary Spray Connection	L070 L071	Yes Yes
CVS Letdown Containment Penetration Line	L051	Yes
CVS Makeup Containment Penetration Line	L053	Yes
CVS Hydrogen Injection Containment Penetration Line	L213 L214 L217	Yes
CVS Zinc Injection Containment Penetration Line	L061	Yes
CVS Supply Line to Regenerative Heat Exchanger	L002	No
CVS Return Line from Regenerative Heat Exchanger	L018 L036	No Yes
CVS Line from Regenerative Heat Exchanger to Letdown Heat Exchanger	L003	No
CVS Lines from Letdown Heat Exchanger to Demin. Tanks	L004 L005 L072	No No No
CVS Lines from Demin Tanks to RC Filters and Connected Lines	L006[1] L007[1] L010[1] L011[1] L012 L015[1] L016[1] L020 L021 L022 L023[1] L024[1] L029 L037	No No No No No No No No No No No No No No

Table 2.3.2-2 (cont.)		
Line Name	**Line Number**	**ASME Code Section III**
CVS Lines from RC Filters to Regenerative Heat Exchanger	L030 L031 L034 L050 L073	No No No No No
CVS Resin Fill Lines to Demin. Tanks	L008(1) L013(1) L025(1)	No No No

Note:

1. Special seismic requirements include only the portion of piping normally exposed to RCS pressure. Piping beyond the first normally closed isolation valve is evaluated as seismic Category II piping extending to either an interface anchor, a rigid support following a six-way anchor, or the last seismic support of a rigidly supported region of the piping system as necessary to satisfy analysis requirements for piping connected to seismic Category I piping systems.

Table 2.3.2-3			
Equipment	**Tag No.**	**Display**	**Control Function**
CVS Makeup Pump A	CVS-MP-01A	Yes (Run Status)	Start
CVS Makeup Pump B	CVS-MP-01B	Yes (Run Status)	Start
Purification Flow Sensor	CVS-001	Yes	-
Purification Return Flow Sensor	CVS-025	Yes	-
CVS Purification Return Line (Position Indicator)	CVS-PL-V081	Yes	-
Auxiliary Spray Line Isolation Valve (Position Indicator)	CVS-PL-V084	Yes	-
Boric Acid Storage Tank Level Sensor	CVS-109	Yes	-
Boric Acid Flow Sensor	CVS-115	Yes	-
Makeup Blend Valve (Position Indicator)	CVS-PL-V115	Yes	-
CVS Demineralized Water Isolation Valve (Position Indicator)	CVS-PL-136A	Yes	-
CVS Demineralized Water Isolation Valve (Position Indicator)	CVS-PL-136B	Yes	-
Makeup Pump Discharge Flow Sensor	CVS-157	Yes	-
Makeup Flow Control Valve (Position Indicator)	CVS-PL-V157	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.3.6-1 (cont.)									
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Control PMS**	**Active Function**	**Loss of Motive Power Position**
RNS Suction from Cask Loading Pit Check Valve	RNS-PL-V056	Yes	Yes	No	-/-	No	-	No	-
RNS Pump Miniflow Air-Operated Isolation Valve	RNS-PL-V057A	Yes	Yes	Yes	No/No	No	No	No	Open
RNS Pump Miniflow Air-Operated Isolation Valve	RNS-PL-V057B	Yes	Yes	Yes	No/No	No	No	No	Open
RNS Return from Chemical and Volume Control System (CVS) Containment Isolation Valve	RNS-PL-V061	Yes	Yes	Yes	Yes/Yes	Yes (Valve Position)	Yes	Transfer Closed	Closed

Note: Dash (-) indicates not applicable.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
364	2.3.06.05b	5.b) Each of the lines identified in Table 2.3.6-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.6-2 for which functional capability is required meets the requirements for functional capability.
365	2.3.06.06	6. Each of the as-built lines identified in Table 2.3.6-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RNS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.
366	2.3.06.07a.i	7.a) The Class 1E equipment identified in Tables 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
367	2.3.06.07a.ii	7.a) The Class 1E equipment identified in Tables 2.3.6-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.6-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
368	2.3.06.07b	7.b) The Class 1E components identified in Table 2.3.6-1 are powered from their respective Class 1E division.	Testing will be performed on the RNS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.6-1 when the assigned Class 1E division is provided the test signal.

Table 2.3.10-1							
Equipment Name	**Tag No.**	**ASME Code Section III**	**Seismic Cat. I**	**Remotely Operated Valve**	**Class 1E/ Qual. for Harsh Envir.**	**Safety-Related Display**	**Active Function**
WLS Containment Sump Level Sensor	WLS-034	No	Yes	No	No/No	No	-
WLS Containment Sump Level Sensor	WLS-035	No	Yes	No	No/No	No	-
WLS Containment Sump Level Sensor	WLS-036	No	Yes	No	No/No	No	-
WLS Drain from Passive Core Cooling System (PXS) Compartment A (Room 11206) Check Valve	WLS-PL-V071B	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from PXS Compartment A (Room 11206) Check Valve	WLS-PL-V072B	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from PXS Compartment B (Room 11207) Check Valve	WLS-PL-V071C	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from PXS Compartment B (Room 11207) Check Valve	WLS-PL-V072C	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from Chemical and Volume Control System (CVS) Compartment (Room 11209) Check Valve	WLS-PL-V071A	Yes	Yes	No	-/-	No	Transfer Closed
WLS Drain from CVS Compartment (Room 11209) Check Valve	WLS-PL-V072A	Yes	Yes	No	-/-	No	Transfer Closed

Note: Dash (-) indicates not applicable.

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
440	2.3.10.05b	5.b) Each of the lines identified in Table 2.3.10-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.10-2 for which functional capability is required meets the requirements for functional capability.
441	2.3.10.06a	6.a) The WLS preserves containment integrity by isolation of the WLS lines penetrating the containment.	See ITAAC Table 2.2.1-3, items 1 and 7.	See ITAAC Table 2.2.1-3, items 1 and 7.
442	2.3.10.06b	6.b) Check valves in drain lines to the containment sump limit cross flooding of compartments.	Refer to item 9 in this table.	Refer to item 9 in this table.
443	2.3.10.07a.i	7.a) The WLS provides the nonsafety-related function of detecting leaks within containment to the containment sump.	i) Inspection will be performed for retrievability of the displays of containment sump level channels WLS-034, WLS-035, and WLS-036 in the MCR.	i) Nonsafety-related displays of WLS containment sump level channels WLS-034, WLS-035, and WLS-036 can be retrieved in the MCR.
444	2.3.10.07a.ii	7.a) The WLS provides the nonsafety-related function of detecting leaks within containment to the containment sump.	ii) Testing will be performed by adding water to the sump and observing display of sump level.	ii) A report exists and concludes that sump level channels WLS-034, WLS-035, and WLS-036 can detect a change of 1.75 ± 0.1 inches.
445	2.3.10.07b	7.b) The WLS provides the nonsafety-related function of controlling releases of radioactive materials in liquid effluents.	Tests will be performed to confirm that a simulated high radiation signal from the discharge radiation monitor, WLS-RE-229, causes the discharge isolation valve WLS-PL-V223 to close.	A simulated high radiation signal causes the discharge control isolation valve WLS-PL-V223 to close.
446	2.3.10.08	8. Controls exist in the MCR to cause the remotely operated valve identified in Table 2.3.10-3 to perform its active function.	Stroke testing will be performed on the remotely operated valve listed in Table 2.3.10-3 using controls in the MCR.	Controls in the MCR operate to cause the remotely operated valve to perform its active function.
447	2.3.10.09	9. The check valves identified in Table 2.3.10-1 perform an active safety-related function to change position as indicated in the table.	Exercise testing of the check valves with active safety functions identified in Table 2.3.10-1 will be performed under pre-operational test pressure, temperature and flow conditions.	Each check valve changes position as indicated on Table 2.3.10-1.

Table 2.3.14-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
479	2.3.14.03	3. The DWS CST provides the nonsafety-related function of water supply to the FWS startup feedwater pumps.	Inspection of the DWS CST will be performed.	The volume of the CST between the tank overflow and the startup feedwater pumps supply connection is greater than or equal to 325,000 gallons.
480	2.3.14.04	4. Displays of the parameters identified in Table 2.3.14-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of parameters in the MCR.	The displays identified in Table 2.3.14-1 can be retrieved in the MCR.

Table 2.3.14-3		
Component Name	**Tag No.**	**Component Location**
Demineralizer Water Storage Tank Degasification System Package	DWS-MS-01	Annex Building
Condensate Storage Tank Degasification System Package	DWS-MS-02	Turbine Building
Demineralized Water Storage Tank	DWS-MT-01	Yard
Condensate Storage Tank	DWS-MT-02	Yard

2.3.15 Compressed and Instrument Air System

Design Description

The compressed and instrument air system (CAS) consists of three subsystems: instrument air, service air, and high-pressure air. The instrument air subsystem supplies compressed air for air-operated valves and dampers. The service air subsystem supplies compressed air at outlets throughout the plant to power air-operated tools and is used as a motive force for air-powered pumps. The service air subsystem is also utilized as a supply source for breathing air. The high-pressure air subsystem supplies air to the main control room emergency habitability system (VES), the generator breaker package, and fire fighting apparatus recharge station.

The CAS is required for normal operation and startup of the plant.

The component locations of the CAS are as shown in Table 2.3.15-3.

1. The functional arrangement of the CAS is as described in the Design Description of this Section 2.3.15.
2. The CAS provides the safety-related function of preserving containment integrity by isolation of the CAS lines penetrating the containment.

Table 2.5.1-1 Functions Automatically Actuated by the DAS
1. Reactor and Turbine Trip on Low Wide-range Steam Generator Water Level or Low Pressurizer Water Level or High Hot Leg Temperature 2. Passive Residual Heat Removal (PRHR) Actuation and In-containment Refueling Water Storage Tank (IRWST) Gutter Isolation on Low Wide-range Steam Generator Water Level or on High Hot Leg Temperature 3. Core Makeup Tank (CMT) Actuation and Trip All Reactor Coolant Pumps on Low Wide-Range Steam Generator Water Level or Low Pressurizer Water Level 4. Isolation of Selected Containment Penetrations and Initiation of Passive Containment Cooling System (PCS) on High Containment Temperature

Table 2.5.1-2 Functions Manually Actuated by the DAS
1. Reactor and Turbine Trip 2. PRHR Actuation and IRWST Gutter Isolation 3. CMT Actuation and Trip All Reactor Coolant Pumps 4. First-stage Automatic Depressurization System (ADS) Valve Actuation 5. Second-stage ADS Valve Actuation 6. Third-stage ADS Valve Actuation 7. Fourth-stage ADS Valve Actuation 8. PCS Actuation 9. Isolation of Selected Containment Penetrations 10. Containment Hydrogen Igniter Actuation 11. IRWST Injection Actuation 12. Containment Recirculation Actuation 13. Actuate IRWST Drain to Containment

Table 2.5.1-3
DAS Sensors and Displays

Equipment Name	Tag Number
Reactor Coolant System (RCS) Hot Leg Temperature	RCS-300A
RCS Hot Leg Temperature	RCS-300B
Steam Generator 1 Wide-range Level	SGS-044
Steam Generator 1 Wide-range Level	SGS-045
Steam Generator 2 Wide-range Level	SGS-046
Steam Generator 2 Wide-range Level	SGS-047
Pressurizer Water Level	RCS-305A
Pressurizer Water Level	RCS-305B

2.6.3 Class 1E dc and Uninterruptible Power Supply System

Design Description

The Class 1E dc and uninterruptible power supply system (IDS) provides dc and uninterruptible ac electrical power for safety-related equipment during normal and off-normal conditions.

The IDS is as shown in Figure 2.6.3-1 and the component locations of the IDS are as shown in Table 2.6.3-4.

1. The functional arrangement of the IDS is as described in the Design Description of this Section 2.6.3.
2. The seismic Category I equipment identified in Table 2.6.3-1 can withstand seismic design basis loads without loss of safety function.
3. Separation is provided between Class 1E divisions, and between Class 1E divisions and non-Class 1E cables.
4. The IDS provides the following safety-related functions:
    a) The IDS provides electrical independence between the Class 1E divisions.
    b) The IDS provides electrical isolation between the non-Class 1E ac power system and the non-Class 1E lighting in the MCR.
    c) Each IDS 24-hour battery bank supplies a dc switchboard bus load for a period of 24 hours without recharging.
    d) Each IDS 72-hour battery bank supplies a dc switchboard bus load for a period of 72 hours without recharging.
    e) The IDS spare battery bank supplies a dc load equal to or greater than the most severe switchboard bus load for the required period without recharging.
    f) Each IDS 24-hour inverter supplies its ac load.
    g) Each IDS 72-hour inverter supplies its ac load.
    h) Each IDS 24-hour battery charger provides the protection and safety monitoring system (PMS) with two loss-of-ac input voltage signals.
    i) The IDS supplies an operating voltage at the terminals of the Class 1E motor-operated valves identified in subsections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.2, 2.3.6, and 2.7.1 that is greater than or equal to the minimum specified voltage.
5. The IDS provides the following nonsafety-related functions:
    a) Each IDS 24-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.
    b) Each IDS 72-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.
    c) Each IDS regulating transformer supplies an ac load when powered from the 480 V motor control center (MCC).

Table 2.6.3-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
608	2.6.03.04h	4.h) Each IDS 24-hour battery charger provides the PMS with two loss-of-ac input voltage signals.	Testing will be performed by simulating a loss of input voltage to each 24-hour battery charger.	Two PMS input signals exist from each 24-hour battery charger indicating loss of ac input voltage when the loss-of-input voltage condition is simulated.
609	2.6.03.04i	4.i) The IDS supplies an operating voltage at the terminals of the Class 1E motor operated valves identified in subsections 2.1.2, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.2, 2.3.6, and 2.7.1 that is greater than or equal to the minimum specified voltage.	Testing will be performed by stroking each specified motor-operated valve and measuring the terminal voltage at the motor starter input terminals with the motor operating. The battery terminal voltage will be no more than 210 Vdc during the test.	The motor starter input terminal voltage is greater than or equal 200 Vdc with the motor operating.
610	2.6.03.05a	5.a) Each IDS 24-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.	Testing of each as-built 24-hour battery charger will be performed by applying a simulated or real load, or a combination of simulated or real loads.	Each 24-hour battery charger provides an output current of at least 150 A with an output voltage in the range 210 to 280 V.
611	2.6.03.05b	5.b) Each IDS 72-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged.	Testing of each 72-hour as-built battery charger will be performed by applying a simulated or real load, or a combination of simulated or real loads.	Each 72-hour battery charger provides an output current of at least 125 A with an output voltage in the range 210 to 280 V.
612	2.6.03.05c	5.c) Each IDS regulating transformer supplies an ac load when powered from the 480 V MCC.	Testing of each as-built regulating transformer will be performed by applying a simulated or real load, or a combination of simulated or real loads, equivalent to a resistive load greater than 30 kW when powered from the 480 V MCC.	Each regulating transformer supplies a line-to-line output voltage of 208 ± 2% V.
613	2.6.03.05d.i	5.d) The IDS Divisions B and C regulating transformers supply their post-72-hour ac loads when powered from an ancillary diesel generator.	Inspection of the as-built system will be performed.	i) Ancillary diesel generator 1 is electrically connected to regulating transformer IDSC-DT-1
614	2.6.03.05d.ii	5.d) The IDS Divisions B and C regulating transformers supply their post-72-hour ac loads when powered from an ancillary diesel generator.	Inspection of the as-built system will be performed.	ii) Ancillary diesel generator 2 is electrically connected to regulating transformer IDSB-DT-1.

Table 2.6.3-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
619	2.6.03.10	10. The IDS electrical distribution system cables are rated to withstand fault currents for the time required to clear the fault from its power source.	Analyses for the as-built IDS dc electrical distribution system to determine fault currents will be performed.	Analyses for the as-built IDS dc electrical distribution system exist and conclude that the IDS dc electrical distribution system cables will withstand the analyzed fault currents, as determined by manufacturer's ratings, for the time required to clear the fault from its power source as determined by the circuit interrupting device coordination analyses.
620	2.6.03.11	11. Displays of the parameters identified in Table 2.6.3-2 can be retrieved in the MCR.	Inspection will be performed for retrievability of the displays identified in Table 2.6.3-2 in the MCR.	Displays identified in Table 2.6.3-2 can be retrieved in the MCR.

Table 2.6.3-4		
Component Name	**Tag No.**	**Component Location**
Division A 250 Vdc 24-Hour Battery Bank	IDSA-DB-1	Auxiliary Building
Division B 250 Vdc 24-Hour Battery Bank 1	IDSB-DB-1	Auxiliary Building
Division B 250 Vdc 72-Hour Battery Bank 2	IDSB-DB-2	Auxiliary Building
Division C 250 Vdc 24-Hour Battery Bank 1	IDSC-DB-1	Auxiliary Building
Division C 250 Vdc 72-Hour Battery Bank 2	IDSC-DB-2	Auxiliary Building
Division D 250 Vdc 24-Hour Battery Bank	IDSD-DB-1	Auxiliary Building
Spare 250 Vdc Battery Bank	IDSS-DB-1	Auxiliary Building
Division A 24-Hour Battery Charger 1	IDSA-DC-1	Auxiliary Building
Division B 24-Hour Battery Charger 1	IDSB-DC-1	Auxiliary Building
Division B 72-Hour Battery Charger 2	IDSB-DC-2	Auxiliary Building
Division C 24-Hour Battery Charger 1	IDSC-DC-1	Auxiliary Building
Division C 72-Hour Battery Charger 2	IDSC-DC-2	Auxiliary Building
Division D 24-Hour Battery Charger 1	IDSD-DC-1	Auxiliary Building
Spare Battery Charger 1	IDSS-DC-1	Auxiliary Building
Division A 250 Vdc Distribution Panel	IDSA-DD-1	Auxiliary Building

3.3 Buildings

Design Description

The nuclear island structures include the containment (the steel containment vessel and the containment internal structure) and the shield and auxiliary buildings. The containment, shield and auxiliary buildings are structurally integrated on a common basemat which is embedded below the finished plant grade level. The containment vessel is a cylindrical welded steel vessel with elliptical upper and lower heads, supported by embedding a lower segment between the containment internal structures concrete and the basemat concrete. The containment internal structure is reinforced concrete with structural modules used for some walls and floors. The shield building cylinder is a composite steel and concrete (SC) structure except for the portion surrounded by the auxiliary building, which is reinforced concrete (RC). The shield building, in conjunction with the internal structures of the containment building, provides shielding for the reactor coolant system and the other radioactive systems and components housed in the containment. The shield building roof is a reinforced concrete structure containing an integral, steel lined passive containment cooling water storage tank. The auxiliary building is reinforced concrete and houses the safety-related mechanical and electrical equipment located outside the containment and shield buildings.

The portion of the annex building adjacent to the nuclear island is a structural steel and reinforced concrete seismic Category II structure and houses the control support area, non-1E electrical equipment, and hot machine shop.

The radwaste building is a steel framed structure and houses the low level waste processing and storage.

The turbine building is a non-safety related structure that houses the main turbine generator and the power conversion cycle equipment and auxiliaries. There is no safety-related equipment in the turbine building. The turbine building is located on a separate foundation. The turbine building structure is adjacent to the auxiliary building to the south and the annex building to the south and east. The turbine building consists of two separate superstructures, the first bay and the main area, both supported on a common reinforced concrete basemat. The first bay, next to the auxiliary building, consists of a combination of reinforced concrete walls and steel framing with reinforced concrete and steel grated floors. It is classified as a seismic Category II structure due to its immediate proximity to the auxiliary building. The main area of the turbine building, immediately to the north of the first bay, is a steel framed building with reinforced concrete and steel grated floors. It is classified as a non-seismic structure. The non-seismic portion of the turbine building is designed with a mix of concentrically and eccentrically braced framing.

The diesel generator building is a non-safety related structure that houses the two standby diesel engine powered generators and the power conversion cycle equipment and auxiliaries. There is no safety-related equipment in the diesel generator building. The diesel generator building is located on a separate foundation at a distance from the nuclear island structures.

The plant gas system (PGS) provides hydrogen, carbon dioxide, and nitrogen gases to the plant systems as required. The component locations of the PGS are located in the yard areas.

c) The walls on the outside of the packaged waste storage room in the radwaste building provide shielding from stored waste.

5. a) Exterior walls and the basemat of the nuclear island have a water barrier up to site grade.

   b) The boundaries between mechanical equipment rooms and the electrical and instrumentation and control (I&C) equipment rooms of the auxiliary building as identified in Table 3.3-2 are designed to prevent flooding of rooms that contain safety-related equipment up to the maximum flood level for each room defined in Table 3.3-2.

   c) The boundaries between the following rooms, which contain safety-related equipment – passive core cooling system (PXS) valve/accumulator room A (11206), PXS valve/accumulator room B (11207), and chemical and volume system (CVS) room (11209) – are designed to prevent flooding between these rooms.

6. a) The radiologically controlled area of the auxiliary building between floor elevations 66′-6″ and 82′-6″ contains adequate volume to contain the liquid volume of faulted liquid radwaste system (WLS) storage tanks. The available room volumes of the radiologically controlled area of the auxiliary building between floor elevations 66′-6″ and 82′-6″ exceeds the volume of the liquid radwaste storage tanks (WLS-MT-05A, MT-05B, MT-06A, MT-06B, MT-07A, MT-07B, MT-07C, MT-11).

   b) The radwaste building packaged waste storage room has a volume greater than or equal to 1293 cubic feet.

7. a) Class 1E electrical cables, fiber optic cables associated with only one division, and raceways are identified according to applicable color-coded Class 1E divisions.

   b) Class 1E divisional electrical cables and communication cables associated with only one division are routed in their respective divisional raceways.

   c) Separation is maintained between Class 1E divisions in accordance with the fire areas as identified in Table 3.3-3.

   d) Physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables.

   e) Class 1E communication cables which interconnect two divisions are routed and separated such that the Protection and Safety Monitoring System voting logic is not defeated by the loss of any single raceway or fire area.

8. Systems, structures, and components identified as essential targets are protected from the dynamic and environmental effects of postulated pipe ruptures.

9. The reactor cavity sump has a minimum concrete thickness as shown on Table 3.3-5 between the bottom of the sump and the steel containment.

10. The shield building roof and the passive containment cooling system (PCS) storage tank support and retain the PCS water. The passive containment cooling system tank has a stainless steel liner which provides a barrier on the inside surfaces of the tank. Leak chase channels are provided over the tank boundary liner welds.

Table 3.3-1 Definition of Wall Thicknesses for Nuclear Island Buildings, Turbine Building, and Annex Building[1]				
Wall or Section Description	**Column Lines[7]**	**Floor Elevation or Elevation Range[7][8]**	**Concrete Thickness[2][3][4][5][9]**	**Applicable Radiation Shielding Wall (Yes/No)**
Labyrinth Wall between Column Line 7.3 and 9.2 and J to K	J to K	From 117'-6" to 135'-3"	2'-0"	Yes
Auxiliary Area Basemat	From 7.3-11 and I-Q, excluding shield building	From 60'-6" to 66'-6"	6'-0"	No
Floor	From 5 to 10'-6" south of 7.3 and I to shield building wall	100'-0"	2'-0"	Yes
Floor	From 10'-6" south of 7.3 to 7.3 and I to shield building wall	100'-0"	3'-0"	Yes
Floor	From K to L and shield building wall to column line 10	100'-0"	0'-9"	Yes
Main Control Room Floor	From 9.2 to 11 and I to L	117'-6"	2'-0"	Yes
Floor	Bounded by shield bldg, 7.3, J, 9.2 and L	117'-6"	2'-0"	Yes
Floor	From shield building to 11 and L to Q	117'-6"	2'-0"	Yes
Floor	From 5 to 7.3 and from I to intersection with shield building wall	135'-3"	0'-9"	Yes
Annex Building				
Column line 2 wall	From E to H	From 107'-2" to 135'-3"	19 3/4"	Yes
Column line 4 wall	From E to H	From 107'-2" to 162'-6" & 166'-0"	2'-0"	Yes
N-S Shield Wall between E and F	From 2 to 4	From 107'-2" to 135'-3"	1'-0"	Yes
Column line 4.1 wall	From E to H	From 107'-2" to 135'-3"	2'-0"	Yes
N-S Labyrinth Wall between column line 7.8 and 9 and G to H	Not Applicable	From 100'-0" to 112'-0"	2'-0"	Yes
E-W Labyrinth Wall between column line 7.1 and 7.8 and G to H	Not Applicable	From 100'-0" to 112'-0"	2'-0"	Yes
Column Line 9 wall	From E to connecting wall between G and H	From 107'-2" to 117'-6"	2'-0"	Yes
Column Line E wall	From 9 to 13	From 100'-0" to 135'-3"	2'-0"	Yes
Column Line 13 wall	From E to I.1	From 100'-0" to 135'-3"	2'-0"	Yes
Column Line I.1 wall	From 11.09 to 13	From 100'-0" to 135'-3"	2'-0"	Yes
Corridor Wall between G and H	From 9 to near 13	From 100'-0" to 117'-6"	1'-6"	Yes

Table 3.3-6
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
766	3.3.00.02a.ii.c	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.c) A report exists that concludes that as-built concrete thicknesses of the non-radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1.
767	3.3.00.02a.ii.d	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.d) A report exists that concludes that the as-built concrete thicknesses of the radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1.
768	3.3.00.02a.ii.e	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.e) A report exists that concludes that the as-built concrete thicknesses of the annex building sections conform with the building sections defined in Table 3.3-1.
769	3.3.00.02a.ii.f	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.f) A report exists that concludes that the as-built concrete thicknesses of the turbine building sections conform to the building sections defined in Table 3.3-1.
770	3.3.00.02b	2.b) Site grade level is located relative to floor elevation 100'-0" per Table 3.3-5.	Inspection of the as-built site grade will be conducted.	Site grade is consistent with design plant grade within the dimension defined on Table 3.3-5.
771	3.3.00.02c	2.c) The containment and its penetrations are designed and constructed to ASME Code Section III, Class MC.[1]	See ITAAC Table 2.2.1-3, Items 2.a, 2.b, 3.a, and 3.b.	See ITAAC Table 2.2.1-3, Items 2.a, 2.b, 3.a, and 3.b.

1. Containment isolation devices are addressed in subsection 2.2.1, Containment System.

Table 3.3-6 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
786	3.3.00.05c	5.c) The boundaries between the following rooms, which contain safety-related equipment – PXS valve/accumulator room A (11206), PXS valve/accumulator room B (11207), and CVS room (11209) – are designed to prevent flooding between these rooms.	An inspection of the boundaries between the following rooms which contain safety-related equipment – PXS Valve/ Accumulator Room A (11206), PXS Valve/Accumulator Room B (11207), and CVS Room (11209) – will be performed.	A report exists that confirms that flooding of the PXS Valve/ Accumulator Room A (11206), and the PXS Valve/ Accumulator Room B (11207) is prevented to a maximum flood level as follows: PXS A 110'-2", PXS B 110'-1"; and of the CVS room (11209) to a maximum flood level of 110'-0".
787	3.3.00.06a	6.a) The available room volumes of the radiologically controlled area of the auxiliary building between floor elevations 66'-6" and 82'-6" exceed the volume of the liquid radwaste storage tanks (WLS-MT-05A, MT-05B, MT-06A, MT-06B, MT-07A, MT-07B, MT-07C, MT-11).	An inspection will be performed of the as-built radiologically controlled area of the auxiliary building between floor elevations 66'-6" and 82'-6" to define volume.	A report exists and concludes that the as-built available room volumes of the radiologically controlled area of the auxiliary building between floor elevations 66'-6" and 82'-6" exceed the volume of the liquid radwaste storage tanks (WLS-MT-05A, MT-05B, MT-06A, MT-06B, MT-07A, MT-07B, MT-07C, MT-11).
788	3.3.00.06b	6.b) The radwaste building package waste storage room has a volume greater than or equal to 1293 cubic feet.	An inspection of the radwaste building packaged waste storage room (50352) is performed.	The volume of the radwaste building packaged waste storage room (50352) is greater than or equal to 1293 cubic feet.
789	3.3.00.07aa	7.a) Class 1E electrical cables, communication cables associated with only one division, and raceways are identified according to applicable color-coded Class 1E divisions.	Inspections of the as-built Class 1E cables and raceways will be conducted.	a) Class 1E electrical cables, and communication cables inside containment associated with only one division, and raceways are identified by the appropriate color code.
790	3.3.00.07ab	7.a) Class 1E electrical cables, communication cables associated with only one division, and raceways are identified according to applicable color-coded Class 1E divisions.	Inspections of the as-built Class 1E cables and raceways will be conducted.	b) Class 1E electrical cables, and communication cables in the non-radiologically controlled area of the auxiliary building associated with only one division, and raceways are identified by the appropriate color code.

Table 3.7-1 Risk-Significant Components	
Equipment Name	**Tag No.**
Air Cooled Chillers	VWS-MS-02, -03
Liquid Radwaste System (WLS)	
Sump Containment Isolation Valves	WLS-PL-V055 WLS-PL-V057
Onsite Standby Power System (ZOS)	
Engine Room Exhaust Fans	VZS-MY-V01A/B, -V02A/B
Onsite Diesel Generators	ZOS-MS-05A/B

Note: Dash (-) indicates not applicable.

Table 3.7-2 PLS D-RAP Control Functions
CVS Reactor Makeup
RNS Reactor Injection from cask loading pit
Startup Feedwater from CST
Spent Fuel Cooling
Component Cooling of RNS and SFS Heat Exchangers
Service Water Cooling of CCS Heat Exchangers
Onsite Diesel Generators
Hydrogen Igniters